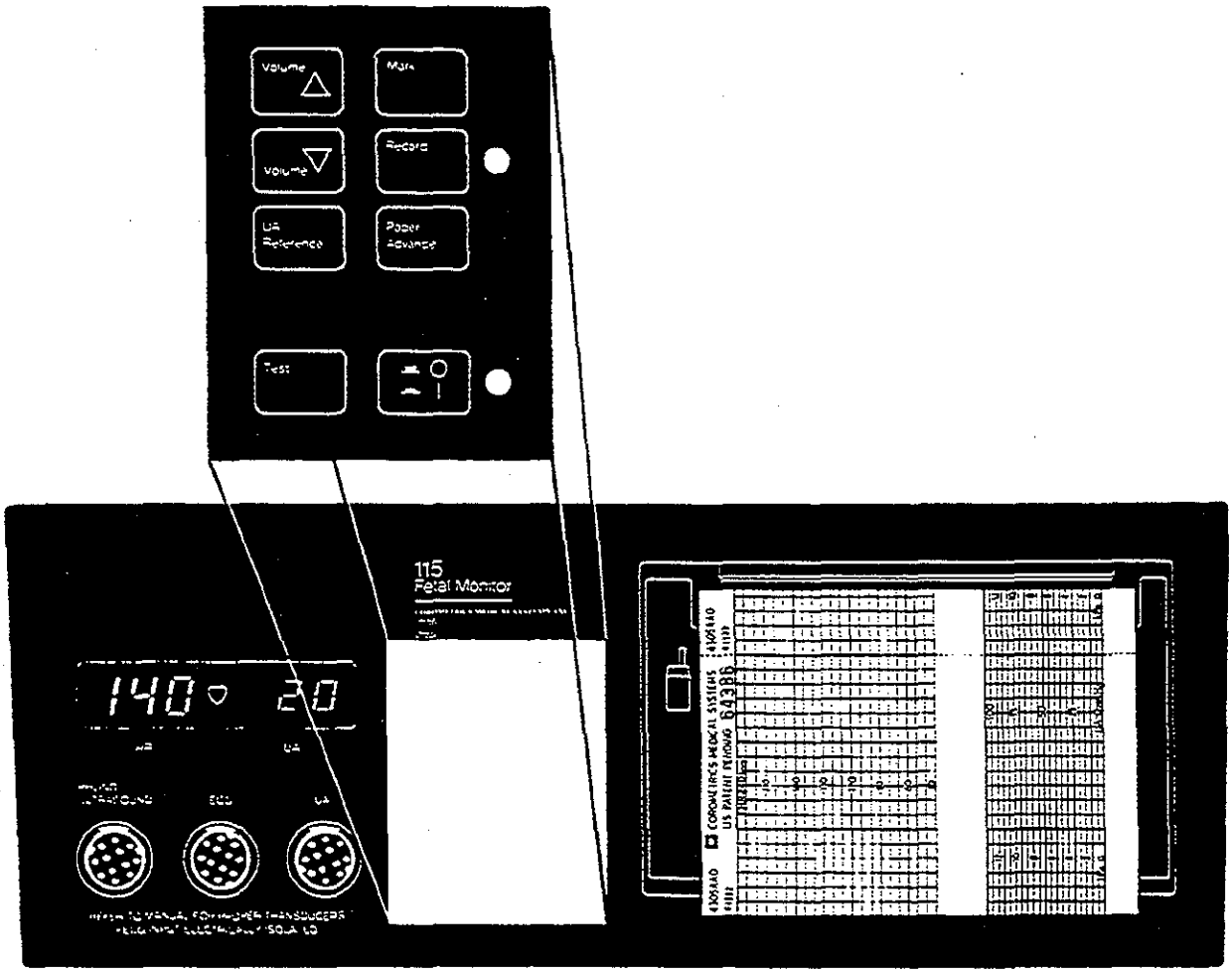


FRONT-PANEL PUSHBUTTONS
FIGURE 3-1

SECTION 3

CONTROLS, CONNECTORS, AND INDICATORS

3.0 FRONT-PANEL CONTROLS

Pushbutton controls found on the front panel of the Model 115 Fetal Monitor are highlighted in **bold face** type below for ease of reference. Refer to FIGURE 3-1.

Volume

These two pushbuttons are used to change the volume of sound emitted from the rear-panel speaker. Depressing the button with the arrow pointing up (△) causes the volume to increase. Depressing the button with the arrow pointing down (▽) causes the volume to decrease. Volume control has no effect on the processing used to compute heart rate.

UA Reference

Depressing this pushbutton for .5 seconds sets the reference level on the UA recorder channel at 0 mmHg for the strain gauge or at 10-Relative for the tocodynamometer.

Test

The monitor self-test routine is initiated by depressing this pushbutton.

Mark

Depressing this button causes an arrow to be printed on the heart rate channel of the strip-chart paper.

Record

Depressing this pushbutton once activates the recorder. Depressing this button again turns off the recorder. Adjacent to the button is an amber indicator light which illuminates while recorder is on and extinguishes when recorder is off.

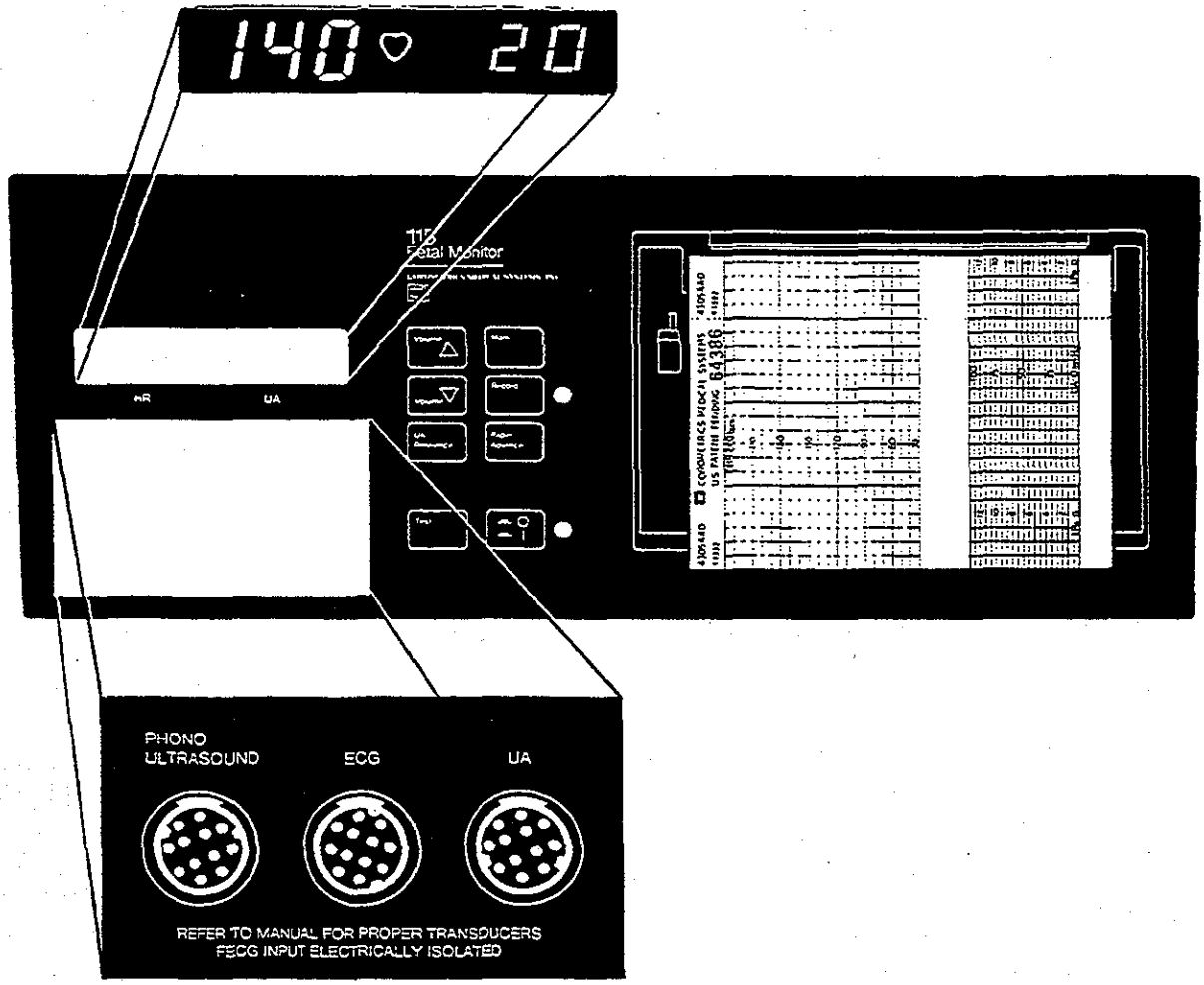
If recorder door is open, or if no strip-chart paper is installed, the recorder will not activate.If paper is near depletion, the amber indicator light will flash. When the recorder is out of paper, the recorder will automatically stop and cannot be restarted until chart paper is inserted.

Paper Advance

Depressing this pushbutton causes the recorder to advance chart paper at 25 cm/min for as long as the button is held down. Monitoring modes, time, date, and chart speed information will be printed onto the paper 20 seconds after the pushbutton is released.

Power

When this pushbutton is depressed, power is applied to the unit and a green indicator light next to the button illuminates. Depressing the button a second time turns off the unit and the indicator light.



FRONT-PANEL DISPLAY/CONNECTORS
FIGURE 3-2

3.1 FRONT-PANEL ALPHANUMERIC DISPLAYS

The front-panel display window is depicted in FIGURE 3-2.

Heart Rate (HR) Display

The heart rate being monitored is displayed in beats-per-minute (BPM) in the left portion of the display window. If two heart rates are being monitored (dual-cardiotach), the display will correspond only to the PHONO/ULTRASOUND mode.

Heartbeat Indicator

A heart-shaped symbol (♡) flashes with each detected, valid heartbeat. The symbol is located at the center of the display screen. If two heart rates are being monitored (dual-cardiotach), this display will correspond only to the PHONO/ULTRASOUND mode.

Uterine Activity (UA) Display

A 2½-digit numerical value located on the right side of the display window, indicates uterine pressure in mmHg for internal monitoring or in relative units for tocotransducer measurements. When a pressure reading exceeds or falls below the 0-100 mmHg range, a flashing "÷" or "–" will appear on the display. The entire display will flash when the transducer cannot be zeroed upon depression of the UA reference control.

Some older versions of the Model 115 Fetal Monitor replace the UA Display with "BASELINE PRESSURE OFF SCALE" when the pressure is below the strip-chart scale range.

3.2 FRONT-PANEL CONNECTORS

The three front-panel connectors are depicted in FIGURE 3-2.

PHONO/ULTRASOUND

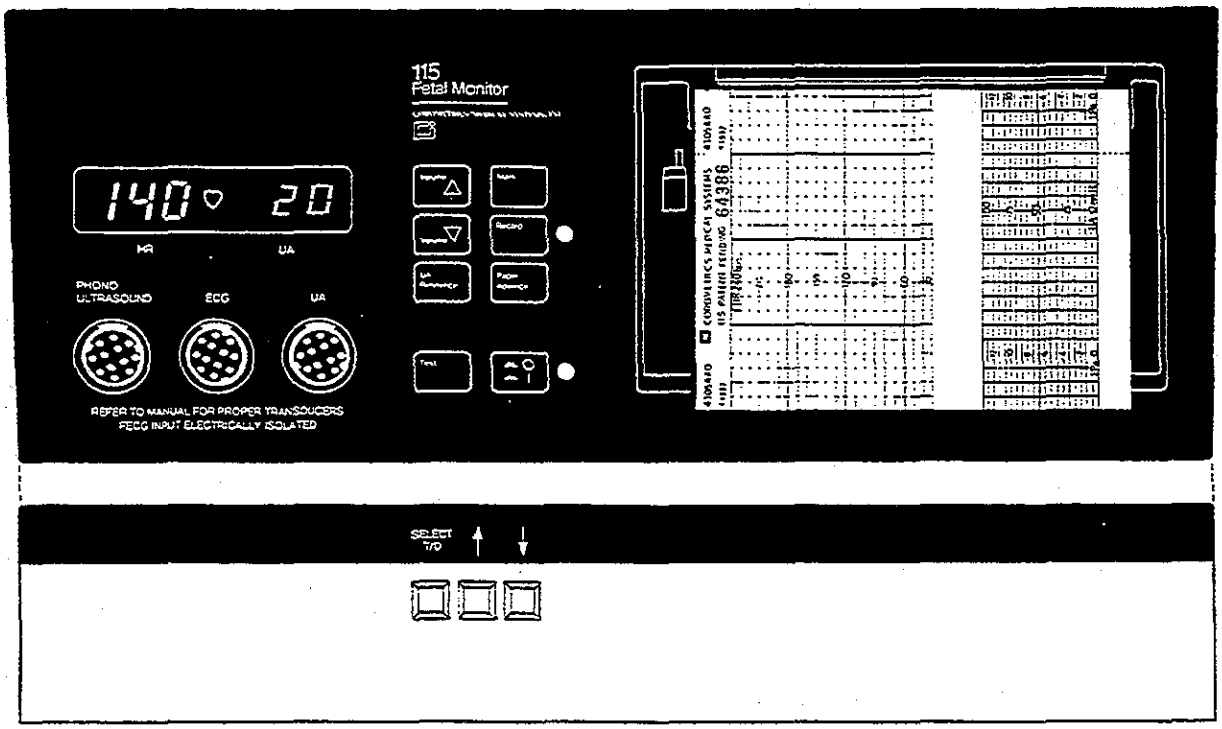
This ochre colored, 12-pin, input receptacle is mechanically keyed to accept only a Model 115 phono or ultrasound transducer plug, and electrically keyed to identify the type of plug inserted.

ECG

This gray colored, 12-pin connector is mechanically keyed to accept the leg-plate transducer or the maternal ECG cable (dual-cardiotach), and electrically keyed to distinguish between the two.

UA

This white, 12-pin receptacle is mechanically keyed to accept either the tocotransducer or strain gauge and electrically keyed to recognize which plug has been inserted.



TIME/DATE PUSHBUTTONS (FRONT PANEL)
FIGURE 3-3

3.3 TIME AND DATE SET PUSHBUTTONS

Three pushbuttons located under the lip of the front panel control the setting of time and date; the function of each pushbutton is indicated by either a title or symbol immediately above the row of pushbuttons (refer to FIGURE 3-3). These pushbuttons are operational only if the TIME/DATE SET switch on the rear panel is in the ENABLE position. All monitoring capabilities of the unit are non-functional while this switch is enabled.

Select T/D

The monitor's internal clock uses a 24 hour format. Each unit of time and date is identified with a code and has an assigned value range as shown in TABLE 3-1. Successive depression of this pushbutton permits selection of the time or date parameter to be changed; the code number will appear on the extreme left of the display screen.

UNIT OF TIME	CODE	RANGE
Minutes	5	00-59
Hours	6	00-23
Day	7	01-31
Month	8	01-12
Year	9	83-99

TIME/DATE CODES
TABLE 3-1

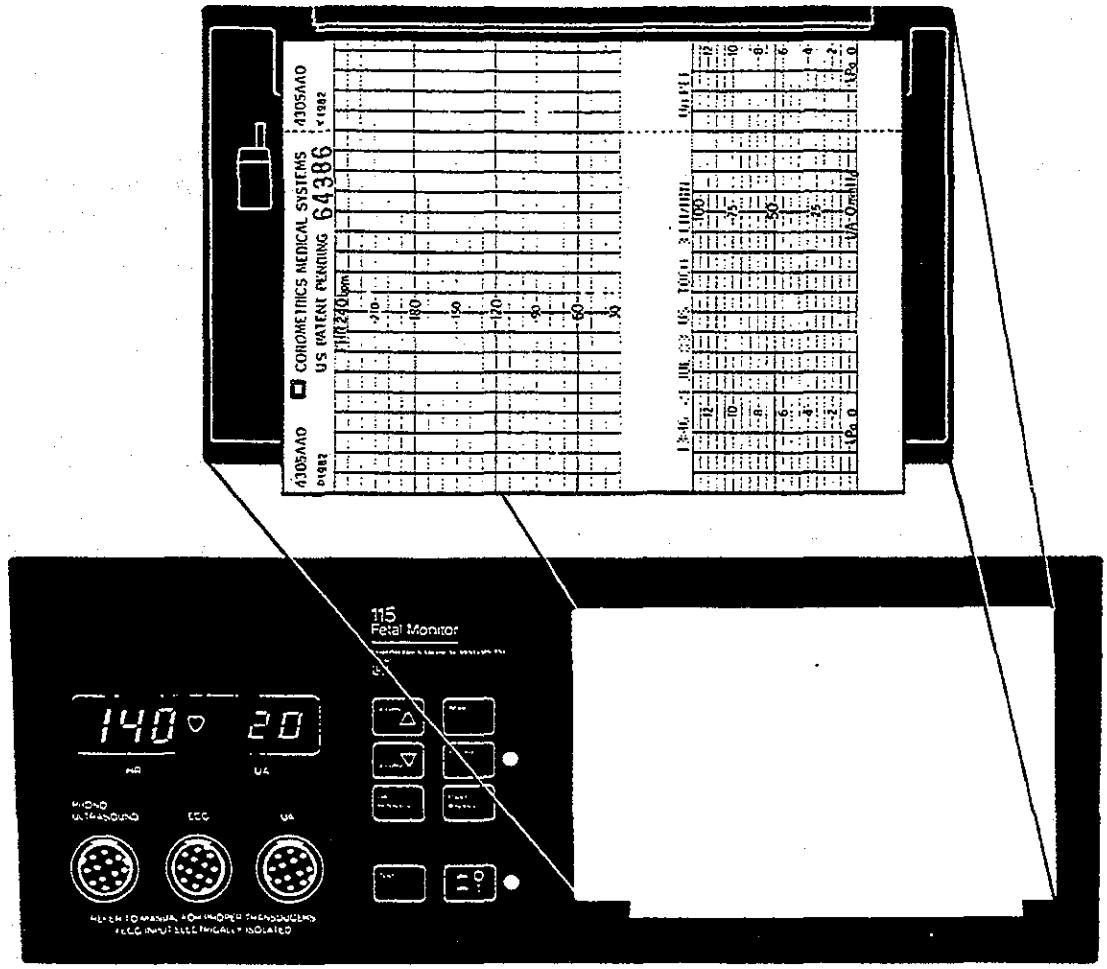
(Upwards Pointing Arrow)

Activation of the "increase value" pushbutton increases the value of the selected time/date parameter. This value is displayed in two digit positions immediately to the right of the code number identifying the unit of time being changed. Continuous activation of the pushbutton causes the front-panel display to cycle from the lowest value of the selected parameter to its highest possible value and then to "wrap around" to the lowest value again.

(Downwards Pointing Arrow)

Activation of the "decrease value" pushbutton is similar to the "increase value" pushbutton except that decreasing of the selected parameter occurs.

NOTE: If a number outside the assigned value range of 83-99 is entered for the "YEAR" unit of time, the internal clock will not activate and the message "SET TIME/DATE" will be printed on the strip-chart paper.



STRIP-CHART RECORDER
FIGURE 3-4

3.4 STRIP-CHART RECORDER

As depicted in FIGURE 3-4, the strip-chart recorder is a dual-channel unit fitted in the right side of the monitor.

Heart Rate Channel

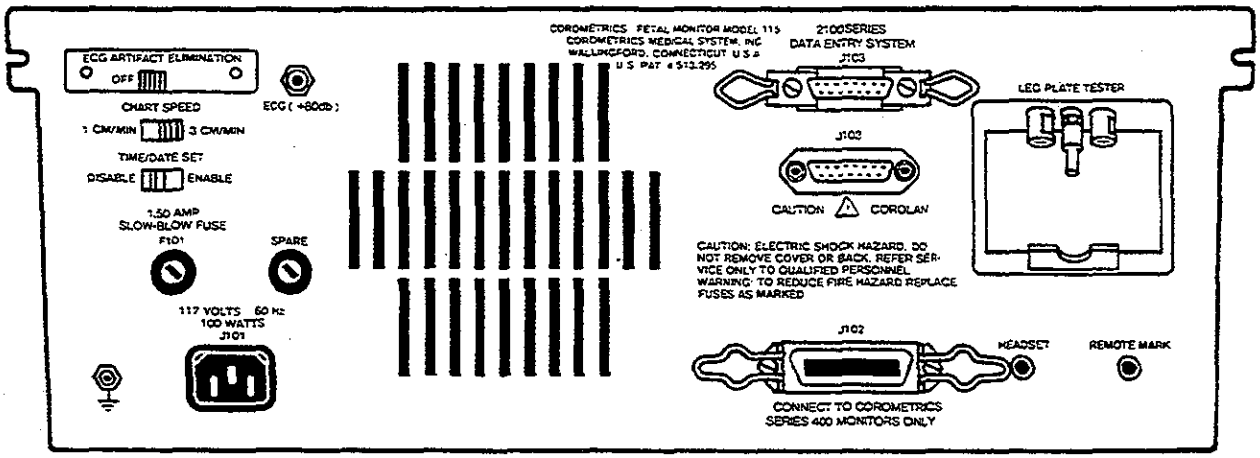
This channel is located on the left side of the recorder and is capable of printing either one or two trends. When only one HR is monitored, only one trend is printed using the normal print density. When two HR's are monitored (dual-cardiotach), the trends are printed with different print densities to help distinguish between them. The darker print trend corresponds to the PHONO/ULTRASOUND mode, while the normal print density corresponds to the ECG mode.

Uterine Activity Channel

This channel is located on the right side of the recorder. If a tocodynamometer is used, readings are recorded in a relative scale from 0 to 100; if a transcervical catheter and externally mounted strain gauge are used, trends are plotted over a range of 0 to 100 mmHg.

Alphanumeric Channels

When activated, the recorder automatically prints time, date, modes of monitoring, and paper speed in the margin between the HR and UA trend grids. Other messages relating to functions and parameter changes will be printed as they occur. In addition, if either the optional 2115 Keypad or 2116 Keyboard is being used, messages keyed in by the operator will appear in this margin.



REAR PANEL
FIGURE 3-5

3.5 REAR-PANEL CONTROLS

Three switches are located at the upper left corner of the rear panel. Refer to FIGURE 3-5.

ECG ARTIFACT ELIMINATION

This is a two-position slide switch that is locked in place with a faceplate and two screws. In order to change the switch position, the plate must be removed, the switch changed, and the plate reversed to lock it in the new position.

In the ON position, any new ECG value which differs by more than ±25 BPM from the previously calculated heart rate will not be printed.

In the OFF position, all ECG values will be printed regardless of previous rates.

This switch affects only the direct ECG mode (FECG or MECG).

CHART SPEED

This is a two-position switch used to select chart paper speed of 1 cm/min or 3 cm/min.

TIME/DATE SET

The time and date can be set only when this switch is placed in the ENABLE position; this simultaneously disables all monitoring capabilities of the unit. The DISABLE position is used at all other times.

3.6 REAR-PANEL CONNECTORS

There are eight connector receptacles on the rear panel of the Model 115 Fetal Monitor. They are discussed below, beginning at the upper left corner of the rear panel and moving in a clockwise direction. Referring to FIGURE 3-5 will help in clarifying the location of each connection.

ECG (+80db)

This receptacle permits recording of direct ECG signals on an external recorder. The output level is compatible with standard adult ECG recorders.

J103

This receptacle is used to connect the optional Corometrics 2115 Keypad or 2116 Keyboard.

Leg Plate Tester

The internal ECG simulator used to test the 115 Leg Plate is connected to this receptacle.

Remote Mark

This is the input connector for the Remote Event Marker.

Headset

This receptacle is used to connect the Corometrics headset. Insertion of the headset into this connector will inhibit sound from the speaker.

J102

This connector is used to interface with the Corometrics SPECTRA 400.™

J101

This is the line cord connector for AC power.

Ground Lug

This terminal is used to provide an auxiliary ground for the monitor.

J108 (Optional)

This optional receptacle is used to interface to an external computer. The interface is either RS-232C or COROLAN™. When the option is present, its connector is located directly below the J103 connector.

3.7 REAR-PANEL FUSES

Two fuses are located in the lower left corner of the rear panel. Refer to FIGURE 3-5.

F101

This fuseholder contains a 1.5 ampere SLO-BLO fuse.

Spare

This fuseholder contains a spare 1.5 ampere SLO-BLO fuse.